

REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Office Action mailed on October 18, 2005.

Claims 1, 8-9, 14, 28, 30, 34, and 40 are amended, claims 2-3, 10-11, and 35-36 are canceled, and no claims are added; as a result, claims 1, 4-9, 12-14, 28-30, 34, and 37-40 are now pending in this application.

Information Disclosure Statement

Applicant herewith submits a complete copy of reference 8Q (Villora, E.G., et al., "Infared Reflectance and Electrical Conductivity of B-Ga₂O₃", Phys. Stat. Sol. (a), Vo. 193, No. 1, pp. 187-195 (2002)) for consideration in the Information Disclosure Statement mailed March 12, 2004. Additionally, Applicant is providing copies of foreign patent documents, WO 02/15233, EP 1306858, and EP 1367657 for consideration in the Information Disclosure Statement mailed June 13, 2005.

Applicant respectfully requests that a copy of the 1449 Form, listing all references that were submitted with the Information Disclosure Statement filed on March 12, 2004 and June 13, 2005, marked as being considered and initialled by the Examiner, be returned with the next official communication.

§ 112 Rejection of the Claims

Claim 30 was rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has amended claim 30 to depend from claim 29, which recites "a physical vapour deposition technique", thereby conferring proper antecedent basis.

§ 102 Rejection of the Claims

Claims 1, 7-9, 14, 28-30, 34, and 40 were rejected under 35 USC § 102(b) as being anticipated by Cillessen, et al. (U.S. Patent No. 5,744,864). Applicant respectfully traverses the rejection as follows.

With regard to independent claim 1, the Examiner cites the Cillessen reference as describing, "[w]herein the channel includes a gallium oxide, Ga₂O₃ (col. 5, lines 34-40)". The reference does not address a channel utilizing a

single-phase crystalline form selected from the group consisting of GaO and Ga₂O.

In contrast, Applicant's claims 1 and 34, as amended, each recites, "[a] channel contacting the drain electrode and the source electrode, wherein the channel includes a single-phase crystalline form selected from the group consisting of GaO and Ga₂O".

Independent claim 9, as amended, recites, "[m]eans for carrying electron flow to electrically couple the drain electrode and the source electrode, wherein the means for carrying electron flow includes means for a single-phase crystalline form selected from the group consisting of GaO and Ga₂O".

In addition, independent claim 28, as amended, recites, "[p]roviding a precursor composition including one or more compounds of a gallium precursor compound, wherein the gallium precursor compound includes a precursor for a single-phase crystalline form selected from the group consisting of GaO and Ga₂O".

As such, Applicant respectfully submits that each and every element and limitation of independent claims 1, 9, 28, and 34, as amended, is not present in the Cillessen reference. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 102 rejection of independent claims 1, 9, 28, and 34, as well as those claims that depend therefrom.

§103 Rejection of the Claims

Claims 2-3, 10-11, 35 and 36 were rejected under 35 USC § 103(a) as being unpatentable over Cillessen, et al. (U.S. Patent No. 5,744,864) in view Ueda, et al. (reference 7Q). Applicant respectfully traverses the rejection as follows.

Claims 2-3, 10-11, 35 and 36 depend from independent claims 1, 9, and 34, respectively. Applicant respectfully submits that independent claims 1, 9, and 34, as amended, are in condition for allowance. From Applicant's review of the Ueda reference, the reference does not cure the deficiencies of the Cillessen reference. That is, Ueda appears to describe, "[t]he anisotropy of electrical and optical properties in β -Ga₂O₃ single crystals." (Page 935, col. 2, lines 6-7). Ueda does not describe, teach or suggest "[a] single-phase crystalline form selected from the group consisting of GaO and Ga₂O", as recited in independent claims 1 and 34, as amended, or "[w]herein the means for carrying electron flow includes

means for a single-phase crystalline form selected from the group consisting of GaO and Ga₂O”, as recited in independent claim 9, as amended.

As such, Applicant respectfully submits that each and every element of independent claims 1, 9, and 34 is not shown in the Cillessen and Ueda references, either independently or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of dependent claims 2-3, 10-11, 35 and 36 which depend therefrom.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Donald J. Coulman at (541) 715-1694 to facilitate prosecution of this matter.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AMENDMENT Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450 on this 13th day of December, 2005.

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